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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,524	03/01/2004	Douglas P. Gethmann	06005/39970	2733

4743 7590 07/24/2007  
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EXAMINER

GARCIA, ERNESTO

ART UNIT	PAPER NUMBER
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3679

MAIL DATE	DELIVERY MODE
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07/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/790,524	<b>Applicant(s)</b> GETHMANN, DOUGLAS P.	
	<b>Examiner</b> Ernesto Garcia	<b>Art Unit</b> 3679	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-16, 18-21, 23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-16, 18-21, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 13, 14, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: "19" as described on page 3, lines 9 and 11.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: “the body including a non-threaded outer side surface” recited in claim 24, lines 7-8, and “the wedge further including a non-threaded outer engagement surface” recited in claim 24, line 14.

### ***Claim Objections***

Claims 9, 18, 19, and 24 are objected to because of the following informalities:

regarding claim 9, “male threads” in lines 2 should be --a male thread--, “female threads” in line 3 should be --a female thread--, “threads” in lines 4, 13, 14, and 17 should be --thread--;

regarding claims 18 and 19, “axial” in line 2 should be deleted to be consistent with that in claim 23; and,

regarding claim 24, “set of male threads” in line 4 should be --male thread--, “set of internal threads” in line 5-6 should be --internal thread--, “threads” in lines 6 and 15

should be --thread--, and --end-- should be inserted after "first axial" in line 8.

Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made. Note that the applicant failed to correct the previous claimed objections.

***Claim Rejections - 35 USC § 112***

Claims 2-16, 20, 21, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, the recitation "a continuous wedge projecting from the first axial end of the body" is misdescriptive and/or inaccurate since nothing really projects from the first axial end 38 as shown in Figure 3B. According to the drawings, the wedge 50 forms part of the first axial end, and according to the specification the wedge is thus formed continuously around the first axis end 38 as described on page 3, line 29 to page 4, line 1, and not projecting from the first axial end.

Regarding claim 24, there is an inconsistency between the language in the preamble and a certain portion in the body of the claim, thereby making the scope of the claims unclear. The preamble clearly indicated that the locking mechanism is "for securing a valve stem to an actuator rod". However, the body of the claim positively

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recites "the actuator rod", e.g., "a female aperture formed in the actuator rod" (line 5), which indicates that the claims are being drawn to a combination of the "locking mechanism" and "the actuator rod". Accordingly, is the combination or subcombination being claimed? Appropriate correction, clarification, or both is required. For purpose of this Office action, the examiner has assumed the actuator rod not being part of the locking mechanism.

Regarding claim 6, the recitation "the male member" in line 2 lacks proper antecedent basis.

Regarding claim 7, the recitations "the male member" and "the female member" ,in line 2, lack proper antecedent basis.

Regarding claim 20, the recitation "the cavity" in lines 1-2 lacks proper antecedent basis.

Regarding claim 21, the recitation "the cone" in line 1 lacks proper antecedent basis.

Regarding claims 2-8, the claims depend from claim 24 and therefore are indefinite.

Regarding claims 10-16, the claims depend from claim 9 and therefore are indefinite.

***Claim Rejections - 35 USC § 102***

Claims 2-7 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Warren, 335,259.

Regarding claim 24, Warren discloses, in Figures 1 and 2, a locking mechanism comprising a valve stem extension **a** and a generally cylindrical body **d**. The extension **a** has a tip **c** and a male thread **b**. The cylindrical body **d** has a longitudinal axis **A1** (see marked-up attachment). The body **d** includes a non-threaded outer side surface **A2**, a first axial end **A3**, and a second axial end **A4**. A wedge **d'** is formed adjacent the first axial end **A3**. The wedge **d'** includes an inner engagement surface **A5**. The wedge **d'** further includes a non-threaded outer engagement surface **A6**. The wedge **d'** is sufficiently pliant.

Regarding claim 2, the wedge **d'** forms a continuous rim extending around the first axial end. The rim **2** has a triangular cross-section.

Regarding claim 3, a central portion of the first axial end **A3** defines a cavity **A7** that forms the inner engagement surface **A5**.

Regarding claim 4, the cavity **A7** has a cone shape.

Regarding claim 5, the cone shape has a vertex angle of approximately 120 degrees.

Regarding claim 6, the wedge **d'** is able to deform radially outward as an insertion force is applied to stem extension **a**.

Regarding claim 7, the body and the stem extension are formed of a similar material (note that the cross hatching is metal for the components).

Claims 9-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Schobbe, 4,498,680.

Regarding claim 9, Schobbe discloses, in Figure 2, a locking assembly comprising a first connection member **13**, a second connection member **10**, and a locking mechanism **15**. The first connection member **13** defines an insertion end **A1** (see marked-up attachment) formed with a male thread **A2**. The second connection member **10** defines an aperture **11** formed with a female thread **12** complementary to the male thread **A2**. The locking mechanism **15** comprises a body **A3** and a continuous wedge **A4**. The body **A3** extends along an axis and has an outer side surface **14**. The body **15** defines a first axial end **A5** and a second axial end **A6**. The wedge **A4** projects



from the first axial end **A5**. The wedge **A4** has an inner engagement surface **A7** and a substantially non-threaded outer engagement surface. The inner engagement surface **A7** engages the insertion end **A1** of the first connection member **13**. The wedge **A4** is sufficiently pliant.

Regarding claim 10, the first connection member **13** comprises an extension stem, and the second connection member **10** comprises a valve actuator rod.

Regarding claim 11, the wedge **A4** forms a continuous rim extending around the first axial end **A5**.

Regarding claim 12, a central portion of the first axial end **A5** defines a cavity (the opening) that forms the inner engagement surface **15**.

Claims 2-7, 9-15, 18-21, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Wosik, 6,598,908.

Regarding claim 24, Wosik discloses, in Figure 7, a locking mechanism comprising a valve stem extension **112** and a generally cylindrical body **302**. The extension **112** has a tip **150b** and a male thread **152**. The cylindrical body **302** has a longitudinal axis. The body **302** includes a non-threaded outer side surface **A6**, a first axial end **A3**, and a second axial end **A2**. A wedge **A4** is formed adjacent the first axial

end **A3**. The wedge **A4** includes an inner engagement surface **A5**. The wedge **A4** further includes a non-threaded outer engagement surface **A3**. The wedge **A4** is sufficiently pliant.

Regarding claims 2, 11, and 18, the wedge **A4** forms a continuous rim extending around the first axial end **A3**.

Regarding claims 3, 12, and 19, a central portion of the body first axial end **A3** defines a cavity (the tapered opening) that forms the inner engagement surface **A5**.

Regarding claims 4, 13, and 20, the cavity (the tapered opening) has a cone shape.

Regarding claims 5, 14 and 21, the cone has a vertex angle of approximately 120 degrees.

Regarding claim 6, the wedge **A4** can deform radially outward as an insertion force is applied to the valve stem extension **112**.

Regarding claim 7, valve stem extension **112** and the body **302** are formed of a similar material.

Regarding claim 9, Wosik discloses, in Figure 7, a locking assembly comprising a first connection member **112**, a second connection member **122**, and a locking mechanism **302**. The first connection member **112** defines an insertion end **150a** formed with a male thread **152**. The second connection member **122** defines an aperture formed with a female thread **A1** complementary to the male thread **152**. The locking mechanism **302** comprises a body **B1** and a continuous wedge **A4**. The body **B1** extends along an axis and has an outer side surface **A6**. The body **302** defines a first axial end **A3** and a second axial end **A2**. The wedge **A4** projects from the first axial end **A3**. The wedge **A4** has an inner engagement surface **A5** and a substantially non-threaded outer engagement surface **B2**. The inner engagement surface **A5** engages the insertion end **150a** of the first connection member **112**. The wedge **A4** is sufficiently pliant.

Regarding claim 10, the first connection member **112** comprises an extension stem, and the second connection member **122** comprises a valve actuator rod.

Regarding claim 15, the locking mechanism, the first connection member, and the second connection member are all formed of materials having similar hardness and strength.

Regarding claim 23, Wosik discloses, in Figure 7, a locking mechanism comprising a valve actuator rod **122**, an extension stem **112**, and a generally cylindrical

body **302**. The rod **122** has a threaded aperture **A1** (see marked-up attachment). The stem **112** has a tip **150a**. The body **302** has a second end **A2** and a first end **A3**. The second end **A2** faces into the aperture **A1** and the first end **A3** faces out of the aperture **A1**. The first end **A3** of the body **302** forms a deflectable wedge **A4** with a triangular cross-section. The wedge **A4** has a generally conical inner engagement surface **A5** disposed inside the wedge **A4** and a non-threaded outer engagement surface **A6**.

***Claim Rejections - 35 USC § 103***

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warren, 335,259.

Regarding claim 8, Warren, as discussed above, fails to disclose the material formed of a 300 series stainless steel. Applicant is reminded that, within the general skill of worker in the art, selecting a known material on the basis of its suitability for the intended use has been consistently held to be an obvious matter of design choice. Further, it is well known in the art per se that 300 series stainless steel is a conventional and commercially available material that prevents rusting. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a 300 series stainless steel for the material to prevent rusting of the components. *In re Leshin*, 125 USPQ 416.

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over  
Wosik, 6,598,908.

Regarding claims 8 and 16, Wosik, as discussed above, fails to disclose the material formed of a 300 series stainless steel. Applicant is reminded that, within the general skill of worker in the art, selecting a known material on the basis of its suitability for the intended use has been consistently held to be an obvious matter of design choice. Further, it is well known in the art per se that 300 series stainless steel is a conventional and commercially available material that prevents rusting. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a 300 series stainless steel for the material to prevent rusting of the components. *In re Leshin*, 125 USPQ 416.

### ***Response to Arguments***

Applicant's arguments filed May 17, 2007 with respect to claims 2-8 and 24 have been fully considered but they are not persuasive.

In particular, note the 35 U.S.C 112(2<sup>nd</sup>) rejections. Further, applicant's arguments with respect to claims 9 and 23 have been considered but are moot in view of the new grounds of rejections.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. In particular, the new recitation "non-threaded outer engagement surface" in claim 9, lines 9-10, "conical inner engagement surface disposed inside the wedge" in claim 23, lines 9-10, and the new claim 24, necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30AM-6:00PM. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*E.L.*



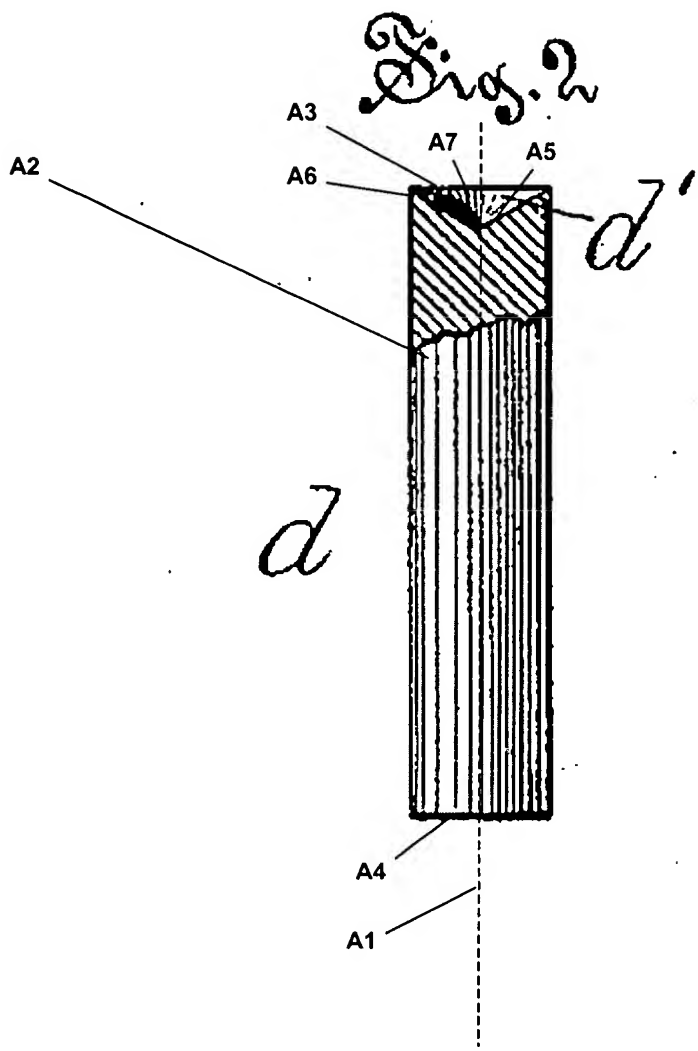
E.G.

July 19, 2007

Attachment: one marked-up page of Warren, 335,259  
one marked-up page of Schobbe, 4,498,680  
one marked-up page of Wosik, 6,598,908

**DANIEL P. STODOLA**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3500**

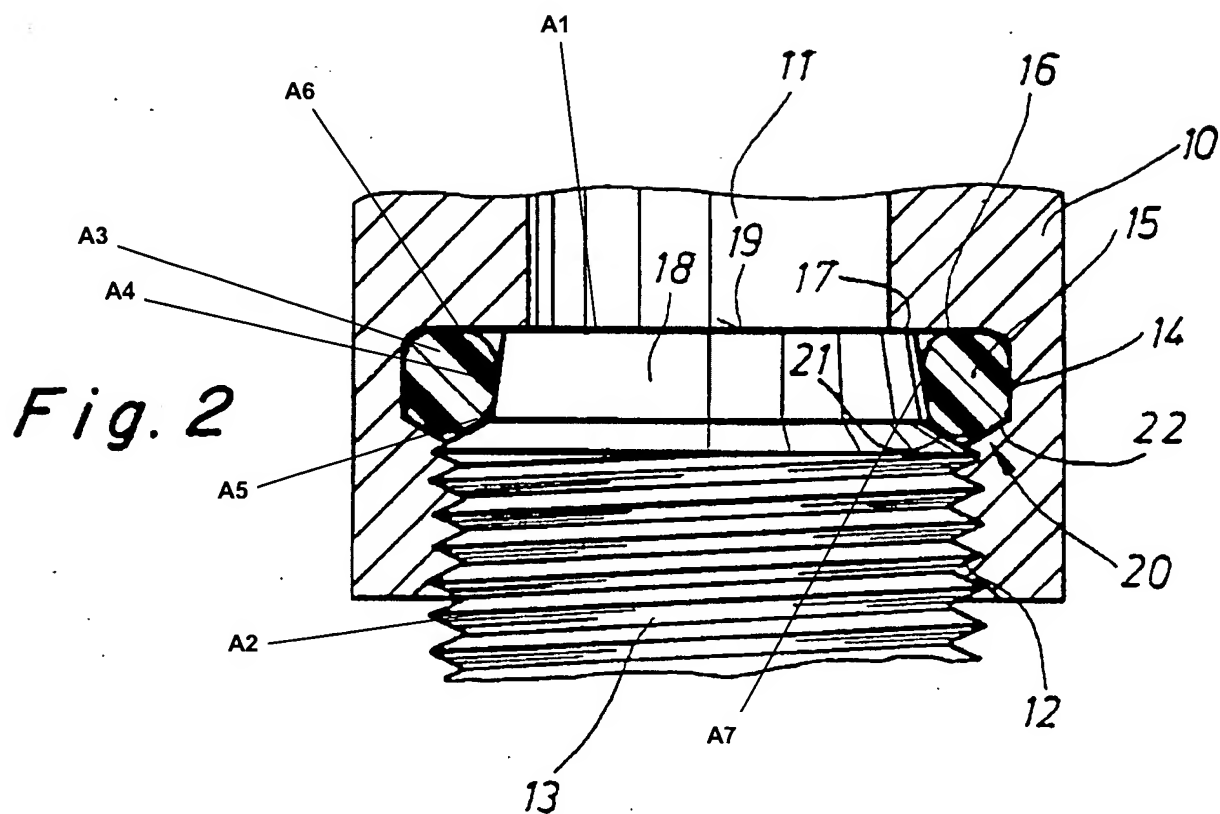
Warren, 335,259





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Schobbe, 4,498,680



Wosik, 6,598,908

